Listing of the Claims:

33. A method of identifying the location of a lesion within a breast duct or breast ductal network, said method comprising:

providing a compound comprising a targeting agent coupled to an identifying agent;

delivering said compound into at least one breast duct and allowing said delivered compound to specifically bind to at least one lesion within at least one duct or ductal network;

washing said breast duct or ductal network with a solution to remove nonspecifically bound compound; and

detecting the presence of said identifying agent within said breast duct or ductal network;

wherein the presence of said identifying agent identifies the location of a lesion within said a breast duct or breast ductal network.

34. A method as in claim 33, wherein delivering comprises non-percutaneous cannulation or catheterization of the breast duct.

35. A method as in claim 33, wherein the coupled compound is delivered to more than one duct on a breast.

36. A method as in claim 33, wherein the cells are identified for the purposes of excising tissue surrounding and including the cells.

37. A method as in claim 33, wherein said target agent comprises an agent selected from the group consisting of a protein; an antibody; an antibody fragment; a polynucleotide; a small molecule; a liposome; a ligand; a lipid; a peptide; and a receptor.

38. A method as in claim 33, wherein said identifying agent comprises an agent selected from the group consisting of a radioactive agent; a radio-opaque agent; a radiolucent agent; a fluorescent agent; a chemiluminescent agent; and a bioluminescent agent.

39. A method as in claim 33, wherein said detection of said compound is through magnetic resonance imaging or positron emission tomography.

40. A method of staging a neoplastic breast lesion within a breast duct or breast ductal network, said method comprising:

providing at least one compound comprising a targeting agent, which specifically binds to either precancerous or cancerous breast lesions, coupled to an identifying agent;

delivering said at least one compound into at least one breast duct and allowing said delivered at least one compound to specifically bind to said lesion within at least one duct or ductal network;

washing said duct or ductal network with a solution to remove nonspecifically bound compound; and

detecting the presence of identifying agent within said breast duct or ductal network;

wherein the presence of said identifying agent determines the stage of said breast lesion as either precancerous or cancerous.

41. A method as in claim 40, wherein delivering comprises non-percutaneous cannulation or catheterization of the breast duct.

42. A method as in claim 40, wherein the coupled compound is delivered to more than one duct on a breast.

43. A method as in claim 40, wherein the cells are identified for the purposes of excising tissue surrounding and including the cells.

44. A method as is claim 40, wherein said precancerous breast lesion comprises cells having a stage selected from the group consisting of hyperplastic, atypical hyperplastic, or presenting low-grade ductal carcinoma *in situ*.

45. A method as is claim 40, wherein said cancerous breast lesion comprises cells having a stage selected from the group consisting of high-grade ductal carcinoma *in situ* or invasive carcinoma.

46. A method as in claim 40, wherein said target agent comprises and agent selected from the group consisting of a protein; an antibody; an antibody fragment; a polynucleotide; a small molecule; a liposome; a ligand; a lipid; a peptide; and a receptor.

47. A method as in claim 40, wherein said identifying agent comprises and agent selected from the group consisting of a radioactive agent; a radio-opaque agent; a radiolucent agent; a fluorescent agent; a chemiluminescent agent; and a bioluminescent agent.

48. A method as in claim 40, wherein said detection of said compound is through magnetic resonance imaging or positron emission tomography.

REMARKS

Status of the Claims

Claims 1-16 have been rejected. Claims 17-32 have been withdrawn from consideration. Claims 1-16 have been canceled without prejudice or disclaimer. Claims 33-48 have been added. Claims 33-48 are now pending. Support for the new claims can be found in the specification, particularly pages 6-8, and pages 14-16, as well as the original claims. Examination and consideration of the new claims are respectfully requested. No new matter has been added by way of amendment.

The Rejections of Claims 5-8 Under 35 U.S.C. §112, First Paragraph Should be Withdrawn:

Claims 5-8 were rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention for the reason set forth in section 7 of the Office Action